REMARKS

In the Office Action mailed June 9, 2005, the Examiner rejected all the pending claims under 35 C.F.R. § 103(a). Applicants respectfully traverse the rejections of the claims and respectfully request reconsideration. As described below, none of the references used in making the rejections show or suggest: 1) a listener that hears a speaker repeating items and then repeats aloud what is heard, 2) automatically preparing a transcription of what the listener repeats aloud, 3) comparing the transcription of what the listener repeated aloud with the items repeated by the speaker, or 4) measuring intelligibility. Thus, any combination of these references fails to show or suggest each and every element of the claims.

Applicants claim a system and method for measuring intelligibility of a speaker. Intelligibility is the degree to which others can understand a person's speech. (See, Applicants' Specification, page 2, lines 12-13.) An objective score of a person's intelligibility may be important in many situations, such as when hiring customer service representatives, teachers, and emergency response coordinators. (See, Applicants' Specification, page 3, lines 7-12.) Because the intelligibility of a speaker is based on a listener's perception of the speaker's speech, both the speaker and the listener (i.e., at least two people) are used to evaluate intelligibility.

In claims 1, 11, 21, 24, 36, and 45, applicants recite an intelligibility measuring system or method. The person whose intelligibility is being evaluated (the speaker) speaks items, such as a list of words, sentences, paragraphs, and so on. The listener hears the speaker who is speaking the items. The listener does not know what items the speaker will speak prior to hearing the speaker speaking the items. The listener then repeats out loud (by voice) what he hears when listening to the speaker. A transcription of what the listener

repeats is automatically created, for example by using an automatic speech recognition transcription program. The transcription is then compared to a text of the items to produce an intelligibility score for the speaker. Because in this instance neither the listener nor another person has to prepare a transcription by hand, the intelligibility system can provide a large number of intelligibility scores in a short period of time.

The Examiner rejected claims 1, 2, 4-8, 11-18, 24, 26, 28, 29, 32, 33, 36, 37, 42, 44, and 45 under 35 C.F.R. § 103(a) as being obvious in light of the combination of U.S. Patent No. 5,634,086 ("Rtischev"), U.S. Patent No. 6,122,614 ("Kahn"), and U.S. Patent No. 4,783,803 ("Baker"). However, the combination of Rtischev, Kahn, and Baker fails to show or suggest the intelligibility system and method as claimed by the applicants.

Rtischev discloses a method and apparatus for voice-interactive language instruction. (See, Rtischev, Title.) "A system can administer a lesson, and particularly a language lesson, and evaluate performance in a natural interactive manner while tolerating strong foreign accents, and produce as an output a reading quality score." (See, Rtischev, Abstract.) The user of the system uses a microphone or telephone to respond to lesson materials. (See, e.g., Rtischev, Figure 2.) The user's responses are detected by a speech recognition system and a scoring system analyzes the speech and reading proficiency. (See, e.g., Rtischev, column 3, lines 10-65.)

Rtischev does not show or suggest that a human listener hears the user. The user speaks directly into a system via the microphone or telephone. A second human is not placed between the user and the system to repeat what the user says to the system. Nor is there any suggestion to add a second human to repeat the user's responses as this would be unnecessary in a system that provides a reading quality score as an output.

Moreover, Rtischev does not show or suggest preparing a transcription, never mind a transcription of what the listener repeats. There is no suggestion within Rtischev to prepare a transcription as this activity would impede with the interactive nature of the language instruction system. As there is no teaching for preparing a transcription, there can be no teaching in Rtischev to compare the text of the items with the transcription. Thus, Rtischev fails to show or suggest at least: (1) a listener that hears a speaker repeating items and repeats aloud what is heard, 2) automatically preparing a transcription of what the listener repeats aloud, 3) comparing the transcription of what the listener repeated aloud with the items repeated by the speaker, or 4) measuring intelligibility.

Kahn falls short of overcoming these deficiencies in Rtischev. Kahn discloses a system and method for automating transcription services. (See, Kahn, Title.) The system receives a voice dictation file from a user (i.e., a speaker) having the status of enrollment, training, or automated. (See, Kahn, Abstract.) If the user's status is either enrollment or training, a human operator (i.e., a listener) hand transcribes the voice dictation file. (See, e.g., Kahn, Figs. 2b and 2c.) If the user's status is enrollment, the human operator also manually creates a verbatim file. (See, e.g., Kahn, Fig. 2b.) If the user's status is training, the speech recognition system is used to generate a written text, which the human operator manually edits to create the verbatim file. (See, e.g., Kahn, Fig. 2c.) The verbatim file is then used to train the speech recognition system. (See, e.g., Kahn, Figs. 2b and 2c.) If the user's status is automated, the voice dictation file is automatically converted to a written file without the use of a human operator. (See, e.g., Kahn, column 10, lines 48-57.)

While Kahn describes a human operator who hears the voice dictation file prepared by the user, there is no reason, much less any suggestion, for the human operator to repeat

aloud what he hears on the voice dictation file. Thus, Kahn does not show or suggest the human operator repeating aloud what he heard when hearing the user on the voice dictation file. Moreover, the transcription that the human operator or the speech recognition system prepares is a transcription of the user's speech, not a transcription of the human operator's speech. Thus, Kahn also does not show or suggest automatically preparing a transcription of what the human operator repeats aloud.

Moreover, Kahn does not show or suggest comparing the transcription with the text of the items. The human operator or the speech recognition system receives a voice dictation file, which is an audio file created by the user by speaking into a recording device. Neither the human operator nor the speech recognition system receives a text of what the user was reading from, because no such text exists. The user would not need a transcription if he already had a hard copy of what he read into the recorder. Thus, the transcription prepared by either the human operator or the speech recognition system is never compared with the text of items repeated by the speaker.

Additionally, Kahn fails to show or suggest measuring intelligibility. Kahn describes that one object of his invention Is to minimize the number human operators needed to transcribe audio files. (Kahn, col. 1, lines 41-45.) Thus, one of Kahn's objectives is to minimize the listener, which is a needed component of applicants' claimed invention for measuring intelligibility. Moreover, Kahn does not describe providing any feedback regarding any ability of the user. Accordingly, Kahn fails to show or suggest measuring intelligibility.

Baker falls short of overcoming these deficiencies in Rtischev and Kahn. Baker is concerned with an improvement to speech recognition systems. (See, e.g., Baker, col. 5, lines 38-41.) Baker's system allows a user of the speech recognition system to confirm the

system's best guess of the spoken word by the user speaking another word. (See, e.g., Baker, Abstract.) This improves "the ease with which the user can confirm its output when the speech recognition is correct and can modify that output when its recognition is in error." (Baker, col. 41, lines 39-44.) However, Baker is silent with respect to a second human (i.e., a listener), transcriptions, comparing items with a transcription, and intelligibility.

The Examiner noted that "the issue of the operator speaking the perceived translation has been addressed by the introduction of the Baker et al reference." (Office Action, page 6.) The Examiner provides support for this conclusion by stating that Baker "teaches a microphonic input for a **user** to input speech for recognition..., wherein the output is in a word text format and is allowed to be edited by the **user**." (Office Action, pages 3-4 (emphasis added).) However, as clearly described in the Examiner's argument, only one human is involved – the user.

Baker does not teach that a listener hears the speaker. Like Rtischev, the user speaks directly into a system via the microphone. (See, e.g., Baker, col. 13, lines 49-66.) A second human is not placed between the user and the system to repeat what the user says to the system. Nor is there any suggestion to add a second human to repeat the user's responses as Baker is concerned with improving the ease in which a user of the speech recognition system can correct the output of the system. (See, e.g., Baker, col. 41, lines 40-45.)

The user's ability to confirm or correct the output of the speech recognition system occurs after the system has analyzed the speech. This is in contrast to Applicants' listener who provides an input to the system. Moreover, replacing the user with a second person to confirm or correct the speech recognition system (which is not suggested by Baker), would

still not show or suggest a listener that hears a speaker repeating items and then repeats aloud what is heard. As described by Baker, any utterance will confirm that the best guess word is in fact the intended word. (See, e.g., Baker, col. 42, lines 3-6.) Thus, even if a second person was suggested by Baker, Baker would not suggest that the second person repeats what the user said.

So like both Rtischev and Kahn, Baker does not show or suggest: 1) a listener that hears a speaker repeating items and then repeats aloud what is heard, 2) automatically preparing a transcription of what the listener repeats aloud, 3) comparing the transcription of what the listener repeated aloud with the items repeated by the speaker, or 4) measuring intelligibility. Thus, any combination of these references also fails to show or suggest these claimed elements. Because the combination of Rtischev, Kahn, and Baker fails to show or suggest each and every element of claims 1, 11, 21, 24, 36, and 45, these claims are not obvious in light of the combination of Rtischev, Kahn, and Baker.

Claims 2 and 4-8 depend from claim 1. Claims 12-18 and 42 depend from claim 11. Claims 26, 28, 29, 32, 33, and 44 depend from claim 24. Claim 37 depends from claim 36. Accordingly, applicants submit the claims 2, 4-8, 12-18, 26, 28, 29, 32, 33, 37, 42, and 44 are not obvious in light of the combination of Rtischev, Kahn, and Baker for at least the reasons described with respect to claims 1, 11, 21, 24, 36, and 45.

The Examiner also rejected claims 9, 10, 19-23, 34, 35, 38, 40, 41, and 43 under 35 C.F.R. § 103(a) as being obvious in light of the combination of Rtischev, Kahn, Baker, and U.S. Patent No. 5,059,127 ("Lewis"). Claims 9, 10, and 41 depend from claim 1. Claims 19 and 20 depend from claim 11. Claims 22-23 and 43 depend from claim 21. Claims 34 and 35 depend from claim 24. Claims 38 and 40 depend from claim 36.

As described above, the combination of Rtischev, Kahn, and Baker does not show or suggest: 1) a listener that hears a speaker repeating items and then repeats aloud what is heard, 2) automatically preparing a transcription of what the listener repeats aloud, 3) comparing the transcription of what the listener repeated aloud with the items repeated by the speaker, or 4) measuring intelligibility. Lewis was cited for the teachings that Item Response Theory "allows creation of a test in which different individuals receive different questions, yet can be scored on a common scale" as well as "permits determination in advance of test administration of the level of ability and the accuracy with which ability has been measured." (See Office Action, page 5.) However, these citations to Lewis fail to overcome the above-noted deficiencies in Rtischev, Kahn, and Baker. Accordingly, for at least the foregoing reasons, applicants submit that claims 9, 10, 19, 20, 22, 23, 34, 35, 38, 40, 41, and 43 are not obvious in light of the combination of Rtischev, Kahn, Baker, and Lewis.

In light of the above remarks, applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a).

CONCLUSION

In light of the above remarks, applicants submit that the present application is in condition for allowance and respectfully request notice to this effect. The Examiner is requested to contact applicants' representative below if any questions arise or if she may be of assistance to the Examiner.

Respectfully submitted,

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